AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended)   An image reading apparatus, comprising:

a light source adapted to illuminate a document;

a plurality of image sensing elements adapted to output electrical signals in accordance with an input light quantity;

a first reference member;

a second reference member;

a memory adapted to store a predetermined time since said light source is turned on until a maximum of electrical signals output from said plurality of image sensing elements at the time said light source is turned on changes a predetermined rate;

a timer adapted to measure a time since said light source is turned on; and

a controller adapted to determine whether the time measured by said timer reaches [[a]] the predetermined time that is until an image signal value of the image sensing element that outputs a maximum signal value changes to a predetermined rate since said light source is turned on, in a case that the predetermined time has not elapsed, acquiring acquire shading correction data by a first method using said first reference member illuminated by said light source, and in a case that the predetermined time has elapsed, acquiring acquire shading correction data by a second method using said second reference member illuminated by said light source.

2. (Previously Presented)   The apparatus according to claim 1, wherein

in the first method, a coefficient for uniformly changing level of the shading

correction data is generated on the basis of data obtained by scanning said first

reference member by said image sensing elements, and in the second method,

shading correction data of each pixel in a main scanning direction is generated by

scanning said second reference member by said image sensing elements.

3. (Previously Presented)   The apparatus according to claim 1, further

comprising:

        a correction unit which uses the shading correction data to perform shading

correction on the electrical signals output from said image sensing elements.

4. (Original)   The apparatus according to claim 1, wherein said first and second

reference members comprise white plates.

5. (Original)   The apparatus according to claim 4, wherein said first reference

member is set at an end portion of a main scanning direction at a predetermined

position of a subscanning direction, and said second reference member is set in the

main scanning direction at a predetermined position in the subscanning direction.

6. (Previously Presented)   The apparatus according to claim 1, wherein the

determination by said controller is performed before each document sheet is read.

7. (Previously Presented)   The apparatus according to claim 6, further

comprising:

      a document feeder capable of successively supplying a plurality of document

sheets,

wherein said controller performs the determination in a case that said document

feeder supplies each document sheet to a predetermined position.

8. (Previously Presented)   The apparatus according to claim 1, wherein in a case

that a first document sheet is to be read after said light source is turned on, said

controller acquires shading correction data using said second reference member

before start of read of the document sheet.

9. (Previously Presented)   The apparatus according to claim 8, wherein in a case

that a first document sheet is to be read after said light source is turned on, and the

predetermined time has not elapsed, said controller skips acquisition of shading

correction data using said first reference member.

10. (Canceled)

11. (Currently Amended)   A control apparatus for an image reading unit having

a light source adapted to illuminate a document, a plurality of image sensing

elements adapted to output electrical signals in accordance with an input light

quantity, a first reference member, and a second reference member, comprising:

a memory adapted to store a predetermined time since said light source is

turned on until a maximum of electrical signals output from said plurality of image

sensing elements at the time said light source is turned on changes a predetermined

rate;

a timer adapted to measure a time since the light source is turned on; and

a controller adapted to determine whether the time measured by said timer

reaches [[a]] the predetermined time that is until an image signal value of the image

sensing element that outputs a maximum signal value changes to a predetermined

rate since said light source is turned on, in a case that the predetermined time has not

elapsed, acquiring acquire shading correction data by a first method using the first

reference member illuminated by said light source, and in a case that the

predetermined time has elapsed, acquiring acquire shading correction data by a

second method using the second reference member illuminated by said light source.

12. (Currently Amended)   A hybrid apparatus comprising:

a light source adapted to illuminate a document;

a plurality of image sensing elements adapted to output electrical signals in

accordance with an input light quantity;

a first reference member;

a second reference member;

a memory adapted to store a predetermined time since said light source is

turned on until a maximum of electrical signals output from said plurality of image

sensing elements at the time said light source is turned on changes a predetermined

rate;

a timer adapted to measure a time since said light source is turned on;

a controller adapted to determine whether the time measured by said timer

reaches [[a]] the predetermined time ~~that is until an image signal value of the image~~

~~sensing element that outputs a maximum signal value changes to a predetermined~~

~~rate since said light source is turned on~~, in a case that the predetermined time has not

elapsed, ~~acquiring~~ acquire shading correction data by a first method using said first

reference member illuminated by said light source, and in a case that the

predetermined time has elapsed, ~~acquiring~~ acquire shading correction data by a

second method using said second reference member illuminated by said light source;

a correction unit adapted to correct the electrical signals output from said

image sensing elements, and to output an image signal; and

a print unit adapted to print an image of the document on a print medium on

the basis of the image signal corrected by said correction unit,

wherein said correction unit performs shading correction using at least the shading

correction data.

13. (Currently Amended)   The apparatus according to claim 12, further

comprising:

an output unit adapted to output the ~~electrical~~ image signals corrected by said

correction unit to an external device via a communication line; and

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an input unit adapted to input an image signal from the external device via

the communication line,

wherein said print unit prints an image on a print medium on the basis of the image

signal input via said input unit

14. (Currently Amended)   A facsimile apparatus, comprising:

a light source adapted to illuminate a document;

a plurality of image sensing elements adapted to output electrical signals in

accordance with an input light quantity;

a first reference member;

a second reference member;

a memory adapted to store a predetermined time since said light source is

turned on until a maximum of electrical signals output from said plurality of image

sensing elements at the time said light source is turned on changes a predetermined

rate;

a timer adapted to measure a time since said light source is turned on;

a controller adapted to determine whether the time measured by said timer

reaches [[a]] the predetermined time that is until an image signal value of the image

sensing element that outputs a maximum signal value changes to a predetermined

rate since said light source is turned on, in a case that the predetermined time has not

elapsed, acquiring acquire shading correction data by a first method using said first

reference member illuminated by said light source, and in a case that the

predetermined time has elapsed, acquiring acquire shading correction data by a

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second method using said second reference member illuminated by said light source;

a correction unit adapted to correct the electrical signals output from said image sensing elements, and to output an image signal;

an output unit adapted to output the electrical signals corrected by said correction unit to an external device via a communication line;

an input unit adapted to input an image signal from the external device via the communication line; and

a print unit adapted to print an image on a print medium on the basis of the image signal input via said input unit,

wherein said correction unit performs shading correction using at least the shading correction data.

15. (Currently Amended)   A control method for an image reading unit having a light source adapted to illuminate a document, a plurality of image sensing elements adapted to output electrical signals in accordance with an input light quantity, a first reference member, and a second reference member, comprising:

<u>storing a predetermined time since said light source is turned on until a maximum of electrical signals output from said plurality of image sensing elements at the time said light source is turned on changes a predetermined rate;</u>

measuring a time since the light source is turned on;

determining whether the measured time reaches [[a]] the predetermined time

~~that is until an image signal value of the image sensing element that outputs a~~

~~maximum signal value changes to a predetermined rate since said light source is~~

~~turned on~~;

acquiring first shading correction data using the first reference member

illuminated by said light source in a case that the predetermined time has not

elapsed; and

acquiring second shading correction data using the second reference member

illuminated by said light source in a case that the predetermined time has elapsed.

16. (Previously Presented)   The method according to claim 15, wherein

the first shading correction data is acquired by generating a coefficient for uniformly

changing level of the shading correction data on the basis of data obtained by

scanning the first reference member by the image sensing elements, and

the second shading correction data is acquired by generating shading correction data

of each pixel in a main scanning direction by scanning the second reference member

by the image sensing elements.

17. (Previously Presented)   The method according to claim 15, further

comprising:

performing shading correction on the electrical signals output from the

image sensing elements by using the first shading correction data or the second

shading correction data.

18. (Original)   The method according to claim 15, wherein the first and second

reference members comprise white plates.

19. (Original)   The method according to claim 18, wherein the first reference

member is set at an end portion of a main scanning direction at a predetermined

position of a subscanning direction of a document, and the second reference member

is set in the main scanning direction at a predetermined position in the subscanning

direction.

20. (Previously Presented)   The method according to claim 15, wherein said

determination and said acquisition of the first shading correction data or the second

shading correction data are performed before each document sheet is read.

21. (Previously Presented)   The method according to claim 20, wherein the image

reading unit further comprises a document feeder capable of successively supplying

a plurality of document sheets, and said determination and said acquisition of the

first shading correction data or the second shading correction data are performed in a

case that the document feeder supplies each document sheet to a predetermined

position.

22. (Currently Amended)   The method according to claim 15, further

comprising determining whether a document sheet is a first document sheet after the

light source is turned on,

wherein in a case that the document sheet is determined to be the first document

sheet, said acquisition step of the second shading correction data is executed before

start of read of the document sheet regardless of a ~~determination~~ result of

determining whether the measured time reaches the predetermined time.

23. (Currently Amended)   The method according to claim 22, wherein in a case

that the document sheet is determined to be the first document sheet, said acquisition

of the first shading correction data is skipped regardless of the ~~determination~~ result

of determining whether the measured time reaches the predetermined time.

24. (Canceled)

25. (Currently Amended)   A computer program product comprising a computer

usable medium having computer readable program code means embodied in said

medium for a control method for an image reading unit having a light source

adapted to illuminate a document, a plurality of image sensing elements adapted to

output electrical signals in accordance with an input light quantity, a first reference

member, and a second reference member, said product including:

first computer readable program code means storing a predetermined time

since said light source is turned on until a maximum of electrical signals output from

said plurality of image sensing elements at the time said light source is turned on

changes a predetermined rate;

[[first]] second computer readable program code means for measuring a time

since the light source is turned on;

[[second]] third computer readable program code means for determining

whether the measured time reaches [[a]] the predetermined time ~~that is until an~~

~~image signal value of the image sensing element that outputs a maximum signal~~

~~value changes to a predetermined rate since said light source is turned on~~;

[[third]] fourth computer readable program code means for acquiring

shading correction data using the first reference member illuminated by said light

source in a case that the predetermined time has not elapsed; and

[[fourth]] fifth computer readable program code means for acquiring shading

correction data using the second reference member illuminated by said light source

in a case that the predetermined time has elapsed.

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